

48

U-37-1-A

16092 C1
File U-37-1A
16111 C1 1A
24071 C3

CS: 16092

ID: C1 U-37-1-A

BORROW REQUIREMENTS				
WHERE REQUIRED STA. TO STA.	AMOUNT REQUIRED	AMOUNT AVAILABLE	SOILS SERIES	PIT LOCATION
100+00 TO 105+00	15,000	15,000	CLAY	CLAY PITS
105+00 TO 110+00	15,000	15,000	CLAY	CLAY PITS
110+00 TO 115+00	15,000	15,000	CLAY	CLAY PITS
115+00 TO 120+00	15,000	15,000	CLAY	CLAY PITS
120+00 TO 125+00	15,000	15,000	CLAY	CLAY PITS
125+00 TO 130+00	15,000	15,000	CLAY	CLAY PITS
130+00 TO 135+00	15,000	15,000	CLAY	CLAY PITS
135+00 TO 140+00	15,000	15,000	CLAY	CLAY PITS
140+00 TO 145+00	15,000	15,000	CLAY	CLAY PITS
145+00 TO 150+00	15,000	15,000	CLAY	CLAY PITS
150+00 TO 155+00	15,000	15,000	CLAY	CLAY PITS
155+00 TO 160+00	15,000	15,000	CLAY	CLAY PITS
160+00 TO 165+00	15,000	15,000	CLAY	CLAY PITS
165+00 TO 170+00	15,000	15,000	CLAY	CLAY PITS
170+00 TO 175+00	15,000	15,000	CLAY	CLAY PITS
175+00 TO 180+00	15,000	15,000	CLAY	CLAY PITS
180+00 TO 185+00	15,000	15,000	CLAY	CLAY PITS
185+00 TO 190+00	15,000	15,000	CLAY	CLAY PITS
190+00 TO 195+00	15,000	15,000	CLAY	CLAY PITS
195+00 TO 200+00	15,000	15,000	CLAY	CLAY PITS
200+00 TO 205+00	15,000	15,000	CLAY	CLAY PITS
205+00 TO 210+00	15,000	15,000	CLAY	CLAY PITS
210+00 TO 215+00	15,000	15,000	CLAY	CLAY PITS
215+00 TO 220+00	15,000	15,000	CLAY	CLAY PITS
220+00 TO 225+00	15,000	15,000	CLAY	CLAY PITS
225+00 TO 230+00	15,000	15,000	CLAY	CLAY PITS
230+00 TO 235+00	15,000	15,000	CLAY	CLAY PITS
235+00 TO 240+00	15,000	15,000	CLAY	CLAY PITS
240+00 TO 245+00	15,000	15,000	CLAY	CLAY PITS
245+00 TO 250+00	15,000	15,000	CLAY	CLAY PITS
250+00 TO 255+00	15,000	15,000	CLAY	CLAY PITS
255+00 TO 260+00	15,000	15,000	CLAY	CLAY PITS
260+00 TO 265+00	15,000	15,000	CLAY	CLAY PITS
265+00 TO 270+00	15,000	15,000	CLAY	CLAY PITS
270+00 TO 275+00	15,000	15,000	CLAY	CLAY PITS
275+00 TO 280+00	15,000	15,000	CLAY	CLAY PITS
280+00 TO 285+00	15,000	15,000	CLAY	CLAY PITS
285+00 TO 290+00	15,000	15,000	CLAY	CLAY PITS
290+00 TO 295+00	15,000	15,000	CLAY	CLAY PITS
295+00 TO 300+00	15,000	15,000	CLAY	CLAY PITS
300+00 TO 305+00	15,000	15,000	CLAY	CLAY PITS
305+00 TO 310+00	15,000	15,000	CLAY	CLAY PITS
310+00 TO 315+00	15,000	15,000	CLAY	CLAY PITS
315+00 TO 320+00	15,000	15,000	CLAY	CLAY PITS
320+00 TO 325+00	15,000	15,000	CLAY	CLAY PITS
325+00 TO 330+00	15,000	15,000	CLAY	CLAY PITS
330+00 TO 335+00	15,000	15,000	CLAY	CLAY PITS
335+00 TO 340+00	15,000	15,000	CLAY	CLAY PITS
340+00 TO 345+00	15,000	15,000	CLAY	CLAY PITS
345+00 TO 350+00	15,000	15,000	CLAY	CLAY PITS
350+00 TO 355+00	15,000	15,000	CLAY	CLAY PITS
355+00 TO 360+00	15,000	15,000	CLAY	CLAY PITS
360+00 TO 365+00	15,000	15,000	CLAY	CLAY PITS
365+00 TO 370+00	15,000	15,000	CLAY	CLAY PITS
370+00 TO 375+00	15,000	15,000	CLAY	CLAY PITS
375+00 TO 380+00	15,000	15,000	CLAY	CLAY PITS
380+00 TO 385+00	15,000	15,000	CLAY	CLAY PITS
385+00 TO 390+00	15,000	15,000	CLAY	CLAY PITS
390+00 TO 395+00	15,000	15,000	CLAY	CLAY PITS
395+00 TO 400+00	15,000	15,000	CLAY	CLAY PITS
400+00 TO 405+00	15,000	15,000	CLAY	CLAY PITS
405+00 TO 410+00	15,000	15,000	CLAY	CLAY PITS
410+00 TO 415+00	15,000	15,000	CLAY	CLAY PITS
415+00 TO 420+00	15,000	15,000	CLAY	CLAY PITS
420+00 TO 425+00	15,000	15,000	CLAY	CLAY PITS
425+00 TO 430+00	15,000	15,000	CLAY	CLAY PITS
430+00 TO 435+00	15,000	15,000	CLAY	CLAY PITS
435+00 TO 440+00	15,000	15,000	CLAY	CLAY PITS
440+00 TO 445+00	15,000	15,000	CLAY	CLAY PITS
445+00 TO 450+00	15,000	15,000	CLAY	CLAY PITS
450+00 TO 455+00	15,000	15,000	CLAY	CLAY PITS
455+00 TO 460+00	15,000	15,000	CLAY	CLAY PITS
460+00 TO 465+00	15,000	15,000	CLAY	CLAY PITS
465+00 TO 470+00	15,000	15,000	CLAY	CLAY PITS
470+00 TO 475+00	15,000	15,000	CLAY	CLAY PITS
475+00 TO 480+00	15,000	15,000	CLAY	CLAY PITS
480+00 TO 485+00	15,000	15,000	CLAY	CLAY PITS
485+00 TO 490+00	15,000	15,000	CLAY	CLAY PITS
490+00 TO 495+00	15,000	15,000	CLAY	CLAY PITS
495+00 TO 500+00	15,000	15,000	CLAY	CLAY PITS
500+00 TO 505+00	15,000	15,000	CLAY	CLAY PITS
505+00 TO 510+00	15,000	15,000	CLAY	CLAY PITS
510+00 TO 515+00	15,000	15,000	CLAY	CLAY PITS
515+00 TO 520+00	15,000	15,000	CLAY	CLAY PITS
520+00 TO 525+00	15,000	15,000	CLAY	CLAY PITS
525+00 TO 530+00	15,000	15,000	CLAY	CLAY PITS
530+00 TO 535+00	15,000	15,000	CLAY	CLAY PITS
535+00 TO 540+00	15,000	15,000	CLAY	CLAY PITS
540+00 TO 545+00	15,000	15,000	CLAY	CLAY PITS
545+00 TO 550+00	15,000	15,000	CLAY	CLAY PITS
550+00 TO 555+00	15,000	15,000	CLAY	CLAY PITS
555+00 TO 560+00	15,000	15,000	CLAY	CLAY PITS
560+00 TO 565+00	15,000	15,000	CLAY	CLAY PITS
565+00 TO 570+00	15,000	15,000	CLAY	CLAY PITS
570+00 TO 575+00	15,000	15,000	CLAY	CLAY PITS
575+00 TO 580+00	15,000	15,000	CLAY	CLAY PITS
580+00 TO 585+00	15,000	15,000	CLAY	CLAY PITS
585+00 TO 590+00	15,000	15,000	CLAY	CLAY PITS
590+00 TO 595+00	15,000	15,000	CLAY	CLAY PITS
595+00 TO 600+00	15,000	15,000	CLAY	CLAY PITS
600+00 TO 605+00	15,000	15,000	CLAY	CLAY PITS
605+00 TO 610+00	15,000	15,000	CLAY	CLAY PITS
610+00 TO 615+00	15,000	15,000	CLAY	CLAY PITS
615+00 TO 620+00	15,000	15,000	CLAY	CLAY PITS
620+00 TO 625+00	15,000	15,000	CLAY	CLAY PITS
625+00 TO 630+00	15,000	15,000	CLAY	CLAY PITS
630+00 TO 635+00	15,000	15,000	CLAY	CLAY PITS
635+00 TO 640+00	15,000	15,000	CLAY	CLAY PITS
640+00 TO 645+00	15,000	15,000	CLAY	CLAY PITS
645+00 TO 650+00	15,000	15,000	CLAY	CLAY PITS
650+00 TO 655+00	15,000	15,000	CLAY	CLAY PITS
655+00 TO 660+00	15,000	15,000	CLAY	CLAY PITS
660+00 TO 665+00	15,000	15,000	CLAY	CLAY PITS
665+00 TO 670+00	15,000	15,000	CLAY	CLAY PITS
670+00 TO 675+00	15,000	15,000	CLAY	CLAY PITS
675+00 TO 680+00	15,000	15,000	CLAY	CLAY PITS
680+00 TO 685+00	15,000	15,000	CLAY	CLAY PITS
685+00 TO 690+00	15,000	15,000	CLAY	CLAY PITS
690+00 TO 695+00	15,000	15,000	CLAY	CLAY PITS
695+00 TO 700+00	15,000	15,000	CLAY	CLAY PITS
700+00 TO 705+00	15,000	15,000	CLAY	CLAY PITS
705+00 TO 710+00	15,000	15,000	CLAY	CLAY PITS
710+00 TO 715+00	15,000	15,000	CLAY	CLAY PITS
715+00 TO 720+00	15,000	15,000	CLAY	CLAY PITS
720+00 TO 725+00	15,000	15,000	CLAY	CLAY PITS
725+00 TO 730+00	15,000	15,000	CLAY	CLAY PITS
730+00 TO 735+00	15,000	15,000	CLAY	CLAY PITS
735+00 TO 740+00	15,000	15,000	CLAY	CLAY PITS
740+00 TO 745+00	15,000	15,000	CLAY	CLAY PITS
745+00 TO 750+00	15,000	15,000	CLAY	CLAY PITS
750+00 TO 755+00	15,000	15,000	CLAY	CLAY PITS
755+00 TO 760+00	15,000	15,000	CLAY	CLAY PITS
760+00 TO 765+00	15,000	15,000	CLAY	CLAY PITS
765+00 TO 770+00	15,000	15,000	CLAY	CLAY PITS
770+00 TO 775+00	15,000	15,000	CLAY	CLAY PITS
775+00 TO 780+00	15,000	15,000	CLAY	CLAY PITS
780+00 TO 785+00	15,000	15,000	CLAY	CLAY PITS
785+00 TO 790+00	15,000	15,000	CLAY	CLAY PITS
790+00 TO 795+00	15,000	15,000	CLAY	CLAY PITS
795+00 TO 800+00	15,000	15,000	CLAY	CLAY PITS
800+00 TO 805+00	15,000	15,000	CLAY	CLAY PITS
805+00 TO 810+00	15,000	15,000	CLAY	CLAY PITS
810+00 TO 815+00	15,000	15,000	CLAY	CLAY PITS
815+00 TO 820+00	15,000	15,000	CLAY	CLAY PITS
820+00 TO 825+00	15,000	15,000	CLAY	CLAY PITS
825+00 TO 830+00	15,000	15,000	CLAY	CLAY PITS
830+00 TO 835+00	15,000	15,000	CLAY	CLAY PITS
835+00 TO 840+00	15,000	15,000	CLAY	CLAY PITS
840+00 TO 845+00	15,000	15,000	CLAY	CLAY PITS
845+00 TO 850+00	15,000	15,000	CLAY	CLAY PITS
850+00 TO 855+00	15,000	15,000	CLAY	CLAY PITS
855+00 TO 860+00	15,000	15,000	CLAY	CLAY PITS
860+00 TO 865+00	15,000	15,000	CLAY	CLAY PITS
865+00 TO 870+00	15,000	15,000	CLAY	CLAY PITS
870+00 TO 875+00	15,000	15,000	CLAY	CLAY PITS
875+00 TO 880+00	15,000	15,000	CLAY	CLAY PITS
880+00 TO 885+00	15,000	15,000	CLAY	CLAY PITS
885+00 TO 890+00	15,000	15,000	CLAY	CLAY PITS
890+00 TO 895+00	15,000	15,000	CLAY	CLAY PITS
895+00 TO 900+00	15,000	15,000	CLAY	CLAY PITS
900+00 TO 905+00	15,000	15,000	CLAY	CLAY PITS
905+00 TO 910+00	15,000	15,000	CLAY	CLAY PITS
910+00 TO 915+00	15,000	15,000	CLAY	CLAY PITS
915+00 TO 920+00	15,000	15,000	CLAY	CLAY PITS
920+00 TO 925+00	15,000	15,000	CLAY	CLAY PITS
925+00 TO 930+00	15,000	15,000	CLAY	CLAY PITS
930+00 TO 935+00	15,000	15,000	CLAY	CLAY PITS
935+00 TO 940+00	15,000	15,000	CLAY	CLAY PITS
940+00 TO 945+00	15,000	15,000	CLAY	CLAY PITS
945+00 TO 950+00	15,000	15,000	CLAY	CLAY PITS
950+00 TO 955+00	15,000	15,000	CLAY	CLAY PITS
955+00 TO 960+00	15,000	15,000	CLAY	CLAY PITS
960+00 TO 965+00	15,000	15,000	CLAY	CLAY PITS
965+00 TO 970+00	15,000	15,000	CLAY	CLAY PITS
970+00 TO 975+00	15,000	15,000	CLAY	CLAY PITS
975+00 TO 980+00	15,000	15,000	CLAY	CLAY PITS
980+00 TO 985+00	15,000	15,000	CLAY	CLAY PITS
985+00 TO 990+00	15,000	15,000	CLAY	CLAY PITS
990+00 TO 995+00	15,000	15,000	CLAY	CLAY PITS
995+00 TO 1000+00	15,000	15,000	CLAY	CLAY PITS

MICHIGAN STATE HIGHWAY DEPARTMENT

JOHN C. MACKIE, COMMISSIONER

PLAN AND PROFILE OF PROPOSED MICHIGAN PROJECT 107-5(4) CONTROL SECTIONS BI 16092 CIRN, BI 16111 CIRN & BI 24071 C3RN INDIAN RIVER-MACKINAW CITY ROAD CHEBOYGAN COUNTY MACKINAW TWP.

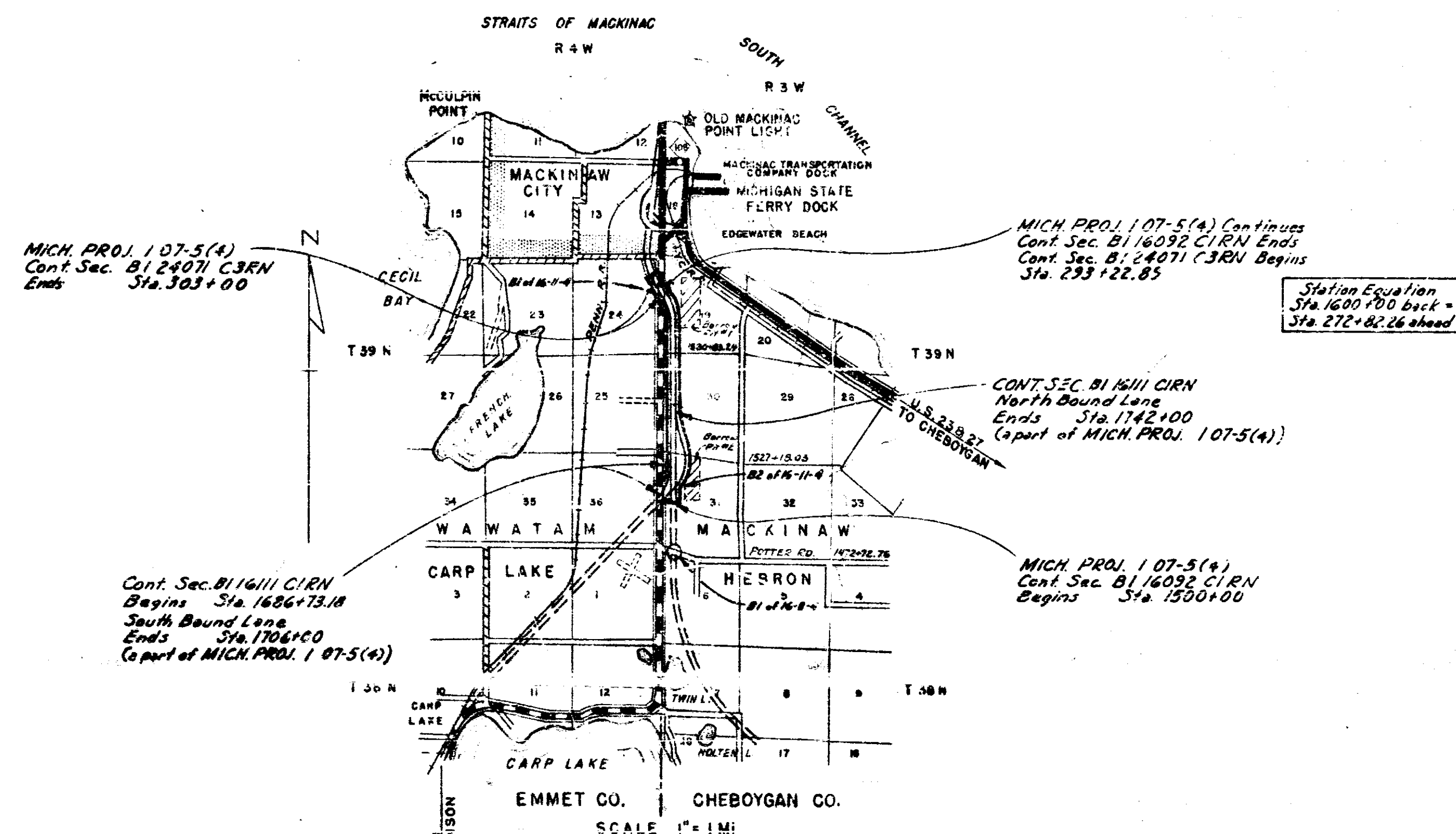
THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN STATE HIGHWAY DEPARTMENT CURRENT STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

STATE	PROJ. NO.	SECTION	SHEET NO.	TOTAL SHEETS
MI	107-5(4)	1	1	1

HIGHWAY CLASSIFICATION: 4630-M-70
R.O.W. Plans 107-5(2), Item 121

- INDEX OF SHEETS
- 1 Title Sheet
 - 2-3 Typical Cross Sections
 - 4 Notes and Special Provisions
 - 5-14 Plan and Profile
 - 15 R.O.W. Plan, Jctn. US 21 & US 31
 - 16 Mass Diagram
 - 17 Special Details
 - 18-19 Quantities
- For Index to Bridge Plans
See Sheets Nos. 101 & 101

STANDARD PLANS
None

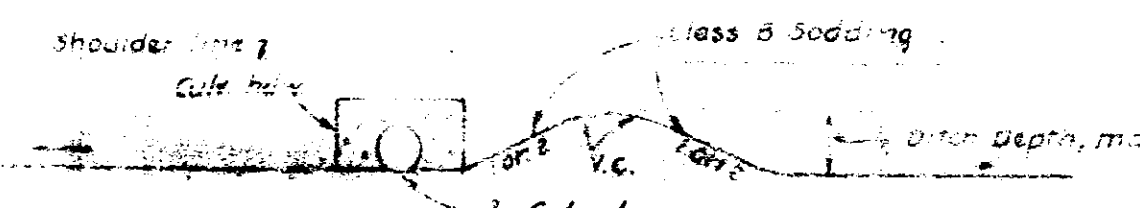
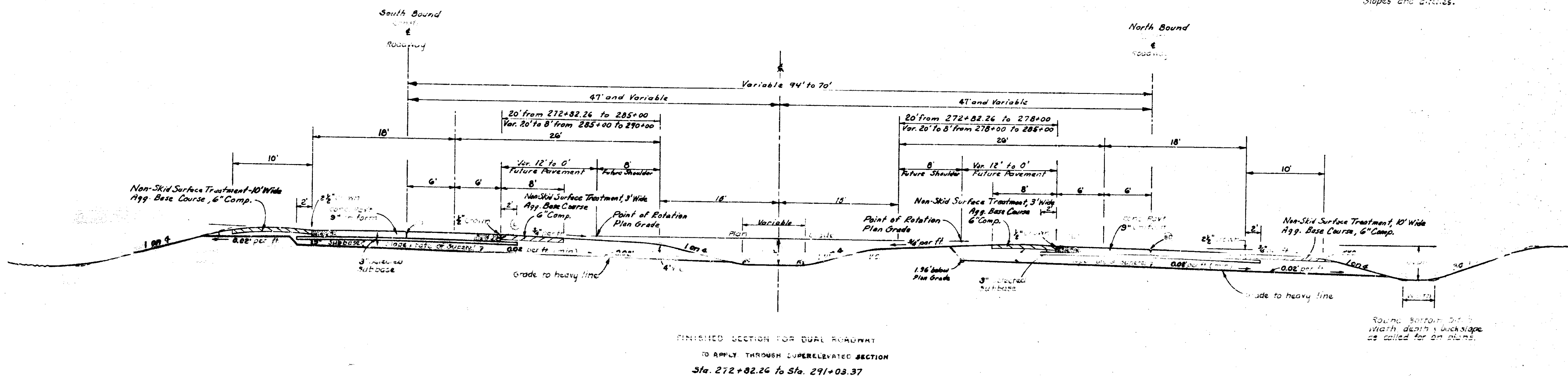
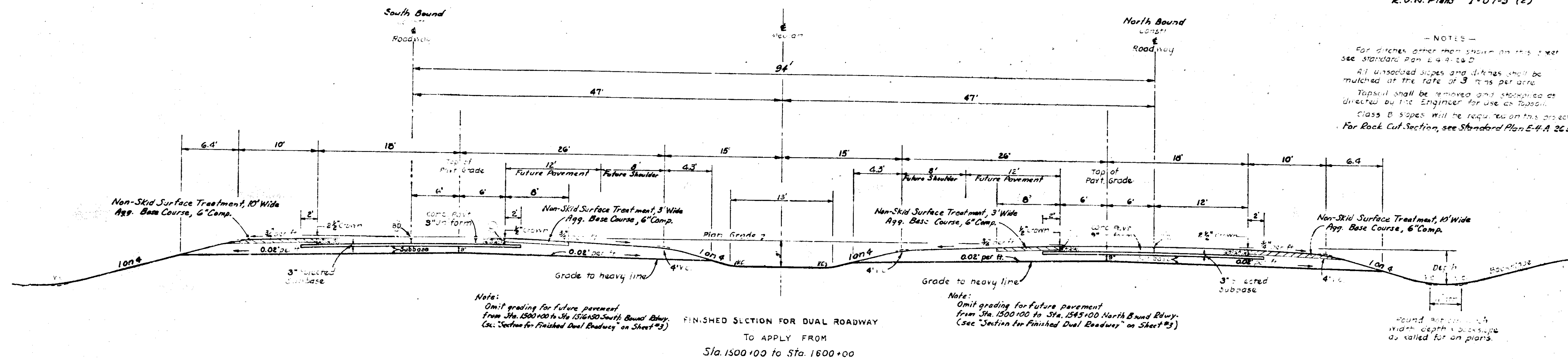


TYPICAL CROSS-SECTIONS

107-54
US27 16092RN CHURCHMAN MCKINNON 2
R.O.W. Plans 1-07-3 (2)

NOTES

For ditches other than shown on this sheet see Standard Plan E-4-A-20-D.
All unsloped slopes and ditches shall be mulched at the rate of 3 tons per acre.
Topsoil shall be removed and stockpiled as directed by the Engineer for use as Topsoil.
Class B Slopes will be required on this project.
For Rock Cut Section, see Standard Plan E-4-A-20-D.



JOINT LEGEND

- B Longitudinal Buckle (see detail on sheet 16092.C1)
- D Longitudinal Buckle (see detail on sheet 16092.C1)
- HD Longitudinal Buckle (see detail on sheet 16092.C1)
- L Longitudinal Buckle (see detail on sheet 16092.C1)

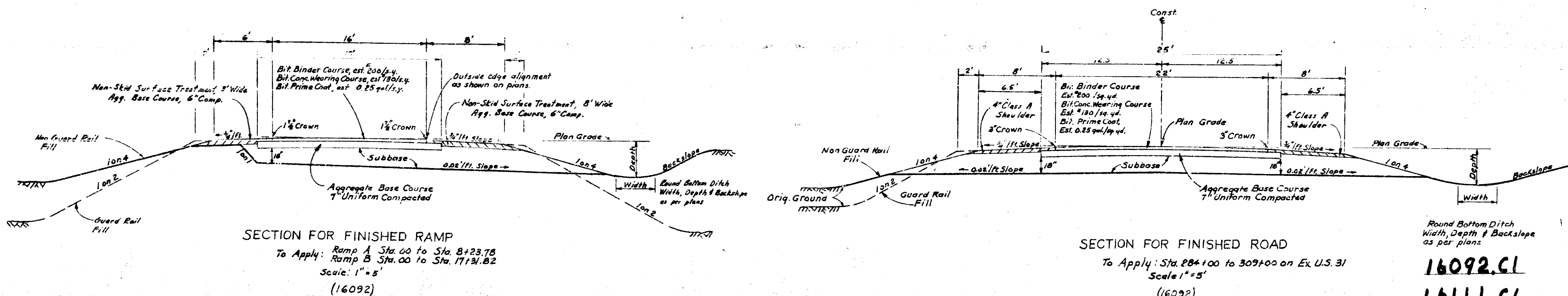
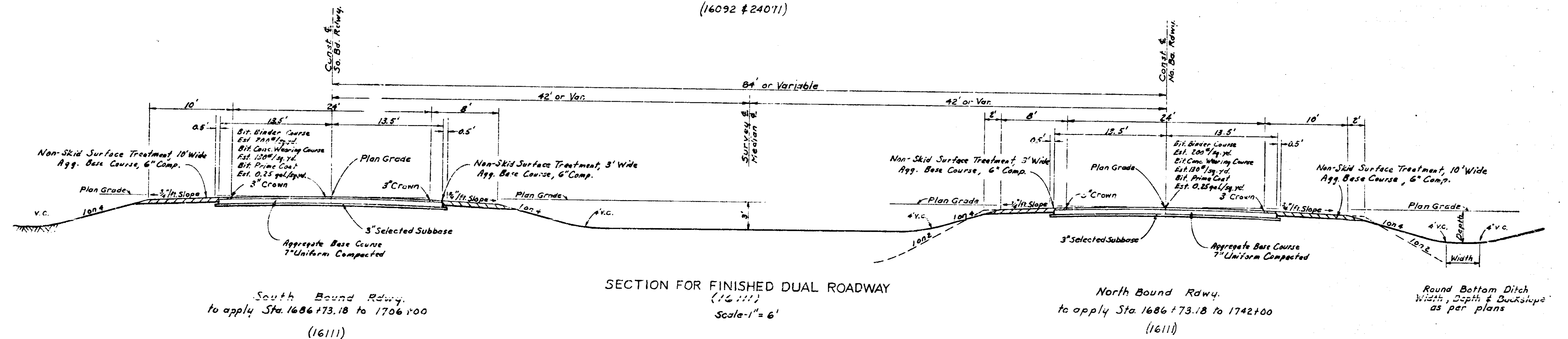
16092.C1

16111.C1

24021.C3

U-37-1A

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
4	MICH.	107-564			
ROUTE	STATE PROJECT	COUNTY	TWP	SHEET NO.	TOTAL SHEET
US 27	2008 12/11/2007	OSHTAWAMIE COUNTY	Polekay Twp	3	
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEET



16092.C1
16111.C1
24071.C3

BI 16092 CIRM
BI 16111 CIRM
BI 24071 CIRM

SPECIAL PROVISIONS

STATION MARKINGS ON HEADWALLS

The Engineer shall place station numbers on all concrete culvert headwalls. The stationing of the centerline of the culvert shall be marked on the top of each headwall with base of numbers toward center of road by using standard pavement marking forms.

TRANSVERSE JOINTS IN CONCRETE PAVEMENT

Transverse joints in concrete pavement shall be placed according to details on Standard Plan E-4-A-135A and E-4-A-127A.

BITUMINOUS MATERIAL ON APPROACHES

Bituminous surfacing mixture where placed on approaches shall be placed to a line 30 feet from the edge of the slab, unless otherwise shown. Where used as a base for bituminous surfacing mixture, the approach aggregate shall have a minimum thickness of 8" compacted. The bituminous material mixture shall be 2 1/2" thick, compacted, and the approach aggregate shall be depressed 2 1/2" to receive the bituminous material.

HAND FINISHING

Hand finishing according to Article 4.14.02-3-i of the Standard Specifications will be permitted on all except the normal full width traffic lanes as directed by the Engineer.

PAVEMENT REINFORCEMENT

The pavement reinforcement shall conform to Standard Plan E-4-A-21F except that the length of sheet or mat for 12-foot lanes may be 15'-0" instead of 10'-0". The laying lap for 15-foot length sheet or mat shall be 13 inches. The computed weight of steel per standard sheet is as follows:

Type of Reinforcement	Weight per 15-foot length of Standard Sheet (15'-0" x 10'-0" x 1/4")
Mesh	126.9
Bar Mat	192.2
Expanded Metal	138.0

WOVEN WIRE FENCE

Where woven wire fence is called for, the Engineer shall check the right of way as actually acquired before placing fence.

BORROW PIT NO. 2

It is estimated that of the 200,000 Cu.Yds. of borrow available in this pit, 200,000 Cu.Yds. is estimated to be dry and 200,000 Cu.Yds. estimated to be wet unseasoned.

The following items of work shall be done as they apply throughout the Project. These items are not detailed or included on the plans and profile sheets.

	BI 16092 CIRM	Unit	BI 16111 CIRM	BI 24071 CIRM
Earth Excavation (Salvaging Materials in Fill Areas)	7020	Cu.Yds.	1000	270
Borrow (To Replace Salvaged Materials)	8434	Cu.Yds.	1236	324
Overhaul (On Above Borrow)	8434	Comp.Cu.Yd.Mi.	852	308
Fine Grading and Cleanup - POC to POC	204	Stas.	71	20
Topsoil Surface (On Headed Slopes and Ditches)	7020	Cu.Yds.		270
Mulching (Slopes, as directed by the Engineer)	73	Tons	12	3
*Seeding	28	Acres	4	1

The following items are estimated for the entire project to correct possible unstable subgrade conditions where designated by the Engineer.

	BI 16092 CIRM	Unit
6" Sewer Pipe Underdrain	1820	Lin.Ft.
Rock Excavation (Waste from Sewer Trenches)	570	Cu.Yds.
Excavation (Waste from Sewer Trenches)	1260	Cu.Yds.
Porous Material - Grade B (LM)	750	Cu.Yds.
**Porous Material - Grade A	1578	Cu.Yds.
Overhaul (Porous Material-Grade A)	1537	Comp.Cu.Yd.Mi.
Grade "A" Concrete	9.0	Cu.Yds.
Reinforcing steel	150	Lbs.
Guard Posts	6	Each

*To be done by Maintenance Division.
**Classed as Earth Excavation from Pit No. 1.

PUBLIC UTILITIES

The following Public Utilities are represented on this project:

NAME AND ADDRESS OF OWNER	KIND OF UTILITY
Michigan Bell Tel. Co. Consumers Power Co.	Telephone Line Power Line

The owners of existing poles and other service structures that are within grading limits and that will interfere with construction operations will move them to locations designated by the engineer or will remove them entirely from the highway right of way.

Owners of public utilities will not be required by the Department to move additional poles and structures in order to facilitate the operation of construction equipment.

GENERAL PLAN NOTES

BEDDING AND FILLING

Bedding and filling around pipe culverts shall be as specified on Standard Plan E-4-A-36C. An estimate of the sand gravel fill required is included on the plans.

PROPERTY OWNERS

Property owners' names, where shown, are for information only and their accuracy is not guaranteed.

POLES

No poles will be permitted within the right of way along this project.

D.P. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
4	MICH.	107-34		
ROUTE	COUNTY	PROJECT	SHEET NO.	TOTAL SHEETS
U-37	Wayne	Michigan Department of Transportation	4	
D.P. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
4	MICH.			
ROUTE	COUNTY	PROJECT	SHEET NO.	TOTAL SHEETS

BI 16092 CIRM
BI 16111 CIRM
BI 24071 CIRM

NOTES APPLYING TO STANDARD PLANS

Where the following items are called for on plans, they are to be constructed according to the Standard Plan given below opposite each item unless otherwise indicated:

Culvert Headwalls	E-4-A-3C, Details 1 or 2
Sewer Pipe Underdrains	E-4-A-3C, Detail 5 for Sewer with Open Joints. (except that Porous Material, Grade B shall be used and the estimated sewer trench width may be 36")
Seeding	E-4-A-10B
Pitch Turnout	E-4-A-10B, Detail 11
Pavement Reinforcement	E-4-A-21F
Grading Cross-Sections	E-4-A-26D
Treatment of Peat Marshes	E-4-A-26D
Pavement Joints	E-4-A-33F (except that plain tie bars will not be permitted)
Setting and Filling around Pipe Culverts	E-4-A-36C
Superelevation of Curves	E-4-A-19B-7 (except that rate of superelevation is to be as called for on plans)
Pavement Crops	E-4-A-49B-7
Two Cable Guard Rail and Guard Posts	E-4-A-75C-2
Road Project Markers	E-4-A-77D
Typical Joint Layout	E-4-A-127A
Dowel Bar Installation for Lane Transfer at Transverse Contraction and Expansion Joints	Optional - E-4-A-130A, E-4-A-130B, or other approved equal
Base Plates for Transverse Pavement Joints	E-4-A-136 (except that spot welds may be substituted for rivets to attach the 1" angle)
Location of Transverse Expansion and Contraction Joints in Concrete Pavement	E-4-A-135A
Barriercade and Project Sign	E-4-A-59E
Concrete Headwalls for Circular Culverts, 10" to 24" diameter (Headwalls are to be omitted from all circular drive culverts up to 24" diameter, inclusive and a concrete ring shall be placed at each end of these culverts)	E-4-A-15 See Plan Sheet No. 17
Steel Beam Guard Rail	E-4-A-67B-3
Minnelco. Catch Basins and Inlets	Optional - E-4-A-67B-3 or E-4-A-27B-4
Curb and Gutter	E-4-A-23E
Bridge Header	E-4-A-23E, Detail 21
Bridge Approach Curb and Gutter	E-4-A-124A

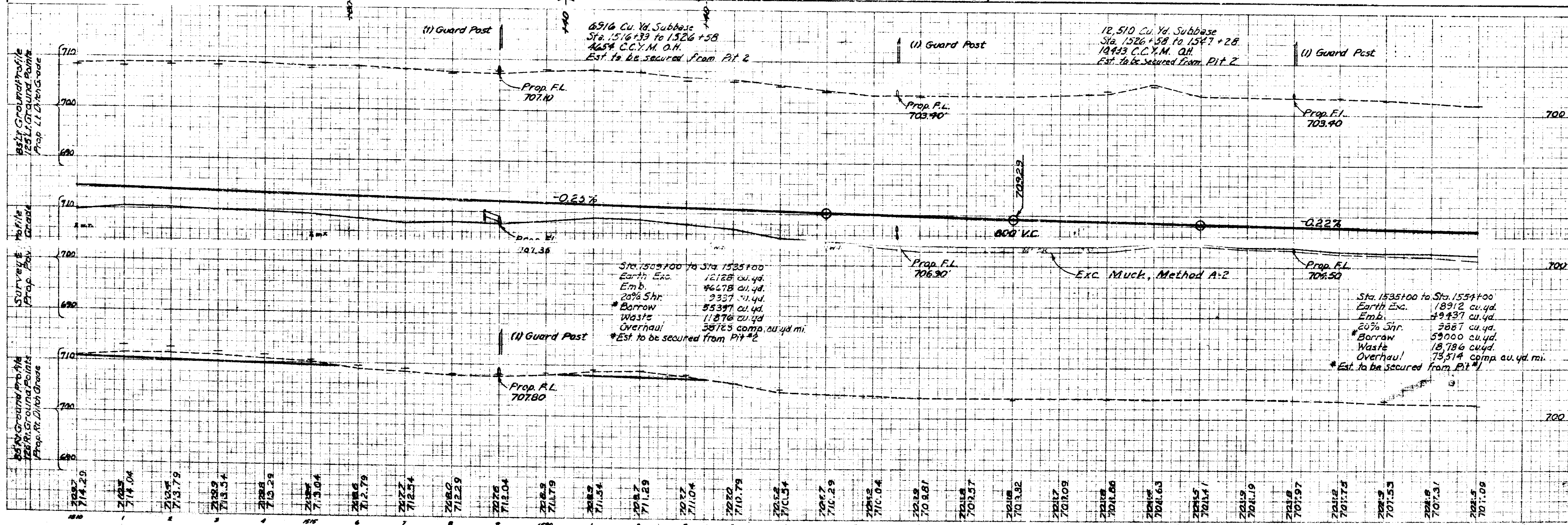
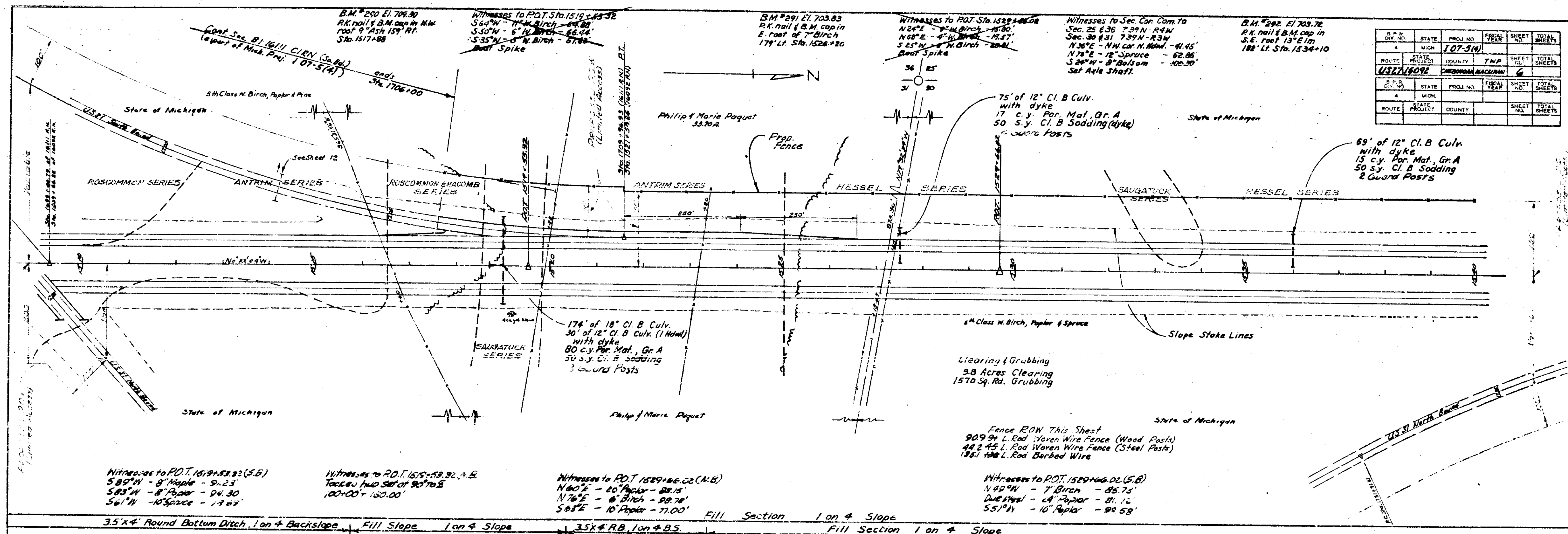
16092.CI-16111.CI-24071.C3

FILE NO. 16092 U-37-1A STATE PROJECT 107-34 SHEET 4

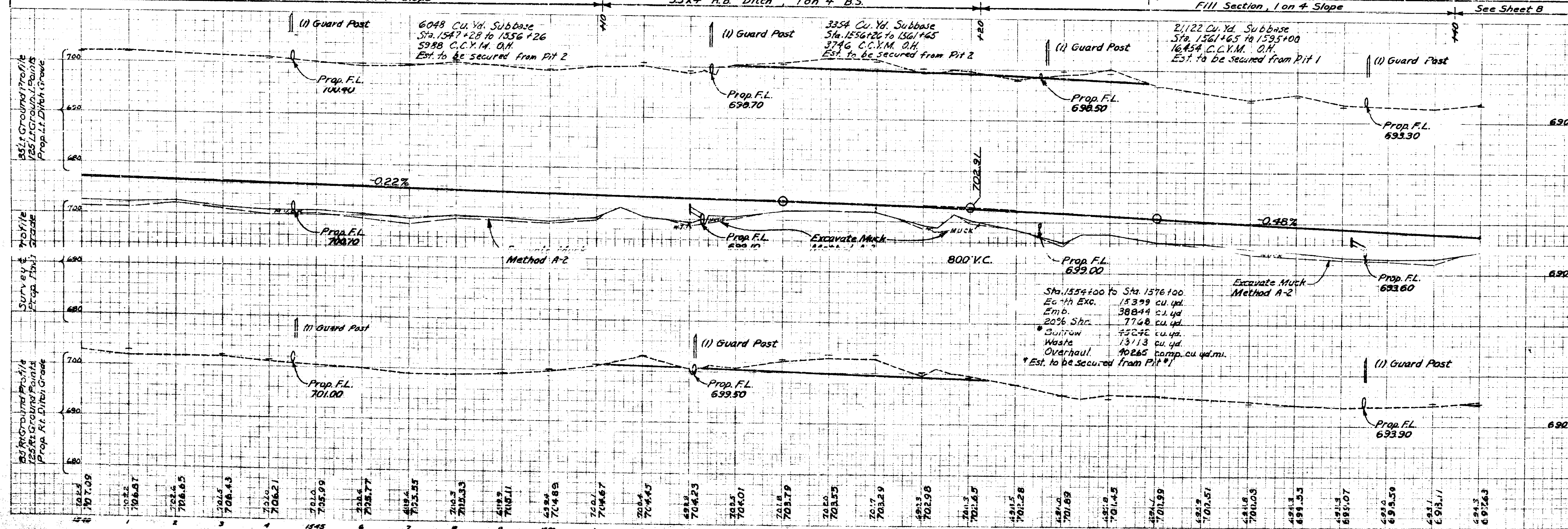
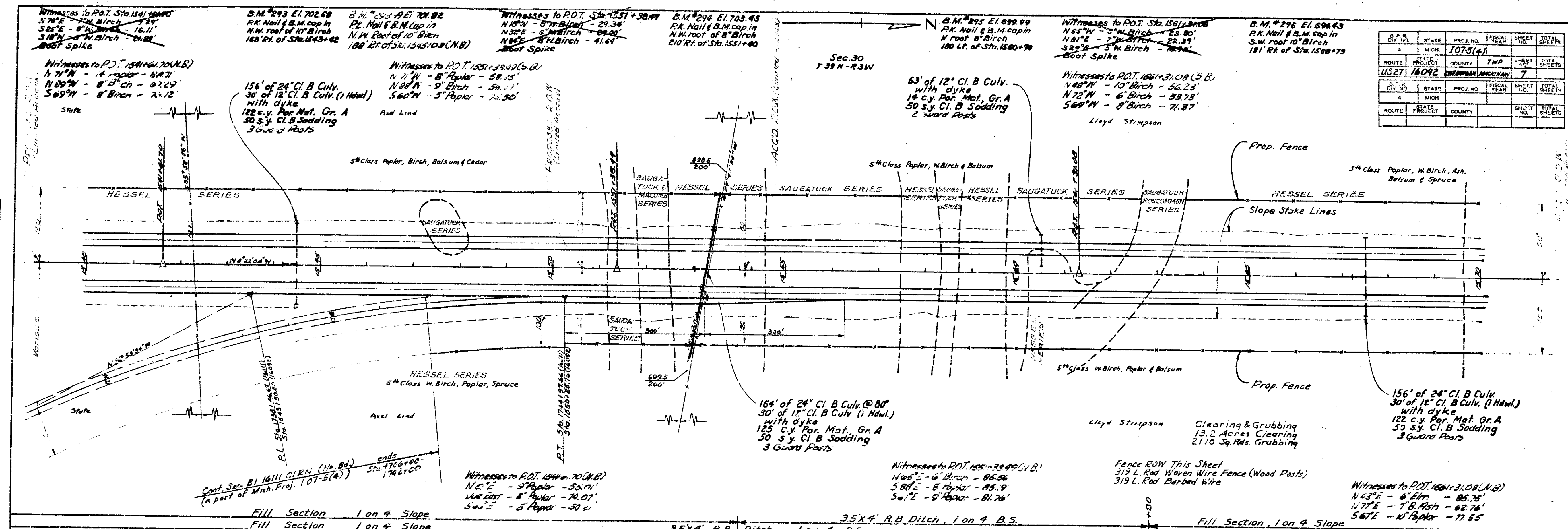
DATE	BY	CHKD
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.

DATE	BY	CHKD
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.

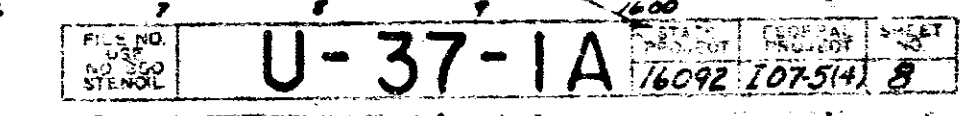
DATE	BY	CHKD
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.
10/1/58	J.R.	W.P.



S & P DIV NO	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MIDH.	1075(4)			
ROUTE	STATE PROJECT	COUNTY	TWP	SHEET NO.	TOTAL SHEETS
US 27	16092	CHEMUNAW	IRONDEQUAN	7	
S & P DIV NO	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MIDH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



FILE NO. USE NO. 330 STANDARD	U-37-1A	STATE PROJECT 16092	FEDERAL PROJECT 107-914	SHEET NO. 7
--	---------	---------------------------	-------------------------------	-------------------

[illegible]

16092;CT-1611;CT-24071;C3

B.M. 300 = 657.74
 Elev. 657.74
 Nail 1/4" cap in N. end
 of 18" Balsam, 182' W.
 of Sta. 273+00

B.M. 2A Elev. 646.82
 Nail 1/4" cap in N. end
 of 18" Balsam, 182' W.
 of Sta. 269+00

B.M. 3A Elev. 618.92
 Nail 1/4" cap in S. end
 of 18" Birch, 139' W.
 of Sta. 270+00

B.M. 4A Elev. 612.38
 Nail 1/4" cap in S. end
 of 18" Pine, 72' W.
 of Sta. 277+00

Witnesses to P.I. 288+25.57
 Boat Spike
 N 7° E 101.50' 11" N. Birch
 S 88° E 156.65' 18" Balsam
 S 28° W 142.66' 14" Spruce

Witnesses to P.I. 305+66.18
 Boat Spike
 S 33° E 153.36' 9" Balsam
 S 73° W 4.74' 8" Balsam
 N 65° W 9.02' 6" Balsam

Survey & Median E.
 Curve Data
 Δ = 44° 44' 30" Lt.
 D = 2° 30'
 T = 2232.01'
 E = 186.53'
 L = 1789.66'
 P.C. = 272+82.26 ahead
 P.T. = 290+00.00 back
 P.I. = 281+41.13
 S.P. = 272+82.26
 S.T. = 290+00.00
 S.C. = 281+41.13
 S.L. = 272+82.26
 S.H. = 290+00.00
 S.V. = 281+41.13
 S.W. = 272+82.26
 S.X. = 290+00.00
 S.Y. = 281+41.13
 S.Z. = 272+82.26

South Bound Rdwy.
 Curve Data
 Δ = 44° 44' 30" Lt.
 D = 2° 30'
 T = 2232.01'
 E = 186.53'
 L = 1789.66'
 P.C. = 272+82.26 ahead
 P.T. = 290+00.00 back
 P.I. = 281+41.13
 S.P. = 272+82.26
 S.T. = 290+00.00
 S.C. = 281+41.13
 S.L. = 272+82.26
 S.H. = 290+00.00
 S.V. = 281+41.13
 S.W. = 272+82.26
 S.X. = 290+00.00
 S.Y. = 281+41.13
 S.Z. = 272+82.26

North Bound Rdwy.
 Curve Data
 Δ = 44° 44' 30" Lt.
 D = 2° 30'
 T = 2232.01'
 E = 186.53'
 L = 1789.66'
 P.C. = 272+82.26 ahead
 P.T. = 290+00.00 back
 P.I. = 281+41.13
 S.P. = 272+82.26
 S.T. = 290+00.00
 S.C. = 281+41.13
 S.L. = 272+82.26
 S.H. = 290+00.00
 S.V. = 281+41.13
 S.W. = 272+82.26
 S.X. = 290+00.00
 S.Y. = 281+41.13
 S.Z. = 272+82.26

Ramp A (Arc. Def.)
 Curve Data
 Δ = 39° 32' 30" Lt.
 D = 11° 30'
 T = 1173.93'
 E = 30.90'
 L = 337.73'
 P.C. = 0+00 ahead
 P.T. = 160+00 back
 P.I. = 80+00
 S.P. = 0+00
 S.T. = 160+00
 S.C. = 80+00
 S.L. = 0+00
 S.H. = 160+00
 S.V. = 80+00
 S.W. = 0+00
 S.X. = 160+00
 S.Y. = 80+00
 S.Z. = 0+00

Ramp B (Arc. Def.)
 Curve Data
 Δ = 39° 32' 30" Lt.
 D = 11° 30'
 T = 1173.93'
 E = 30.90'
 L = 337.73'
 P.C. = 0+00 ahead
 P.T. = 160+00 back
 P.I. = 80+00
 S.P. = 0+00
 S.T. = 160+00
 S.C. = 80+00
 S.L. = 0+00
 S.H. = 160+00
 S.V. = 80+00
 S.W. = 0+00
 S.X. = 160+00
 S.Y. = 80+00
 S.Z. = 0+00

Witnesses to P.I. 288+25.57
 N 7° E 101.50' 11" N. Birch
 S 88° E 156.65' 18" Balsam
 S 28° W 142.66' 14" Spruce

B.M. 300-A = 657.74
 Elev. 657.74
 Nail 1/4" cap in N. end
 of 18" Balsam, 182' W.
 of Sta. 273+00

B.M. 2A Elev. 646.82
 Nail 1/4" cap in N. end
 of 18" Balsam, 182' W.
 of Sta. 269+00

B.M. 3A Elev. 618.92
 Nail 1/4" cap in S. end
 of 18" Birch, 139' W.
 of Sta. 270+00

B.M. 4A Elev. 612.38
 Nail 1/4" cap in S. end
 of 18" Pine, 72' W.
 of Sta. 277+00

Witnesses to P.I. 288+25.57
 Boat Spike
 N 7° E 101.50' 11" N. Birch
 S 88° E 156.65' 18" Balsam
 S 28° W 142.66' 14" Spruce

Witnesses to P.I. 305+66.18
 Boat Spike
 S 33° E 153.36' 9" Balsam
 S 73° W 4.74' 8" Balsam
 N 65° W 9.02' 6" Balsam

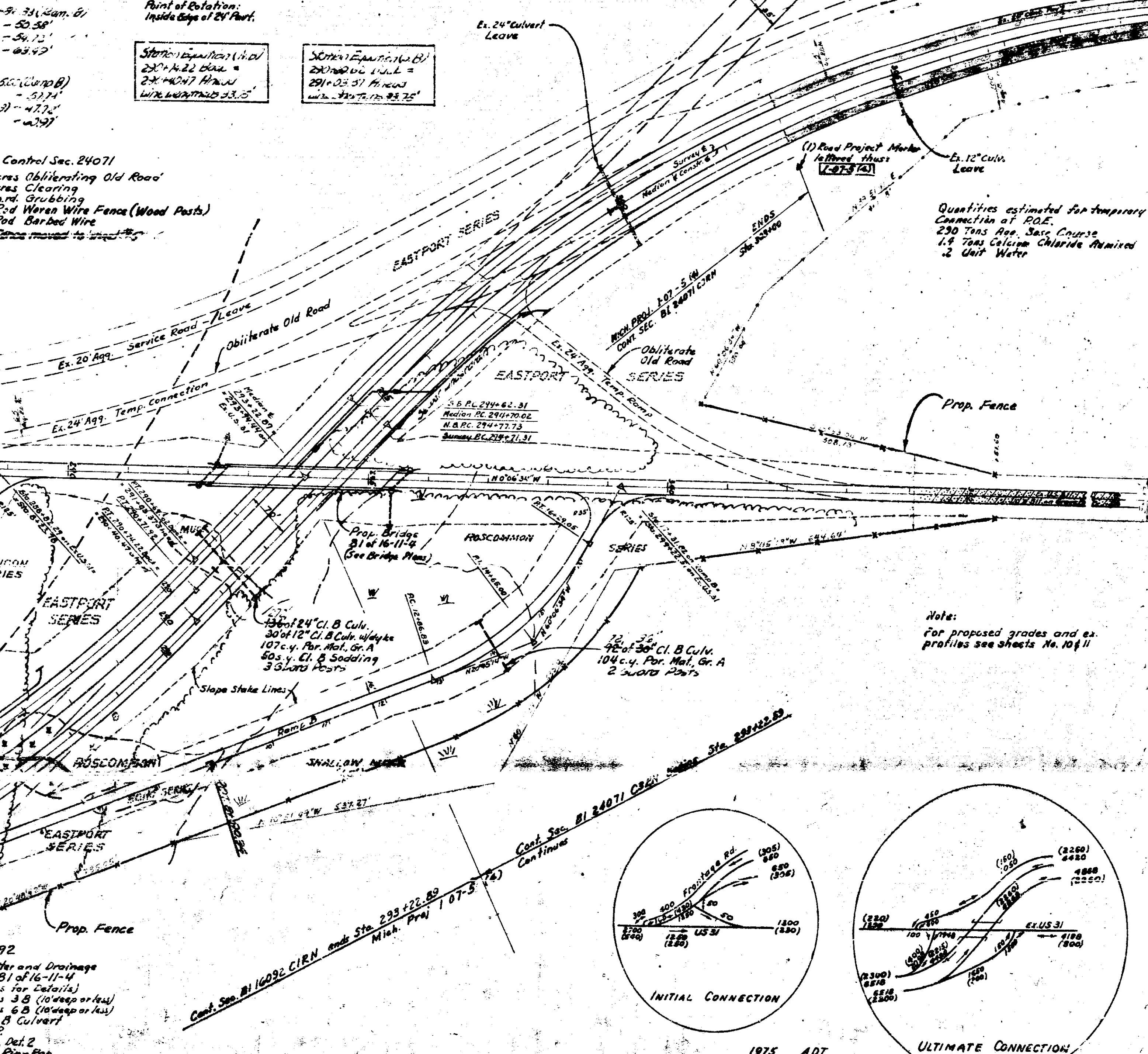
Conf. Sec. 16092 this Sheet
 27 acres Clearing
 1300 sq. ft. Grubbing
 192 L. Rod Woven Wire Fence (Steel Posts)
 94 L. Rod Woven Wire Fence (Wood Posts)
 286 L. Rod Barbed Wire

104' of 24" Cl. B. Culv.
 77 c.y. Por. Mat. Gr. A
 10 c.y. Plain Rip-Rap
 2 Guard Posts

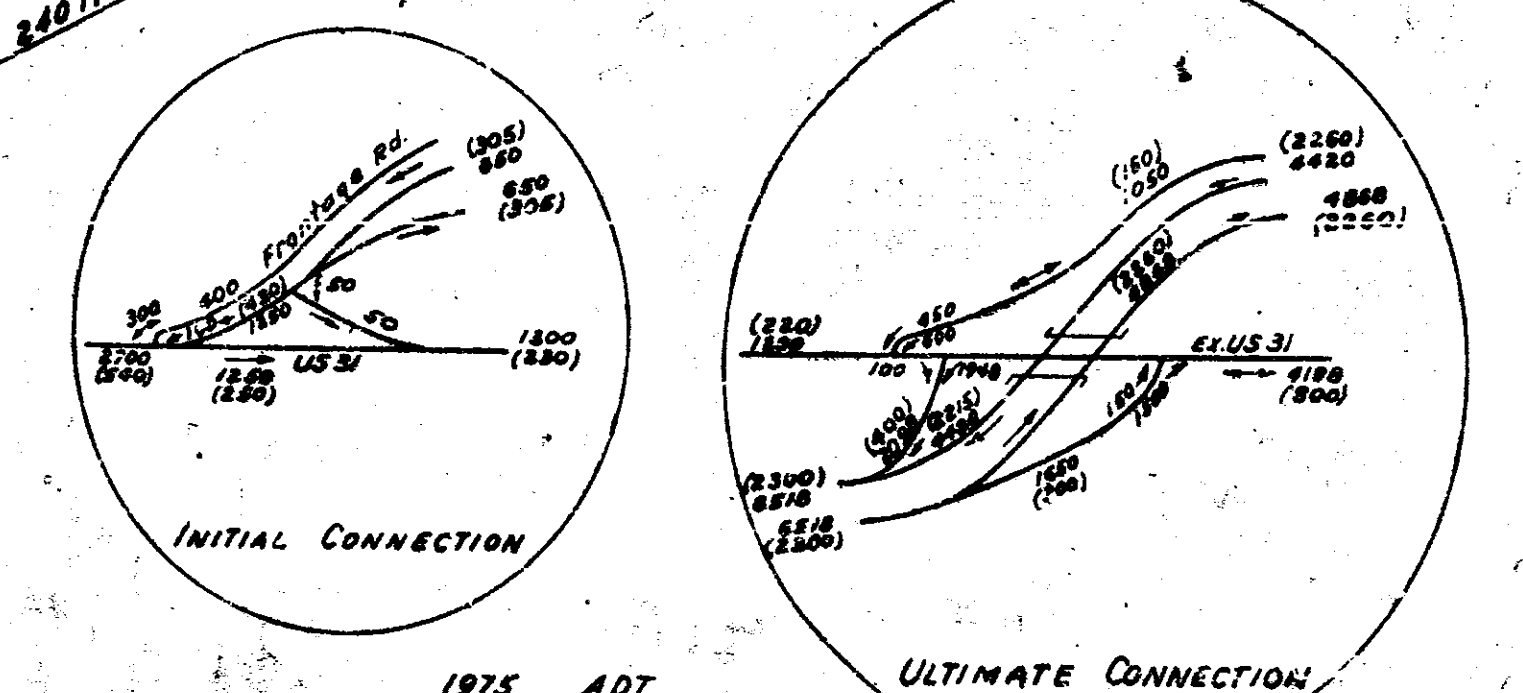
75' of 12" Cl. B. Culv.
 17 c.y. Por. Mat. Gr. A
 50 c.y. Cl. B. Sadding
 2 Guard Posts

STATION	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
16092	MI	107-6(4)	4	4

STATION	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
16092	MI	107-6(4)	4	4



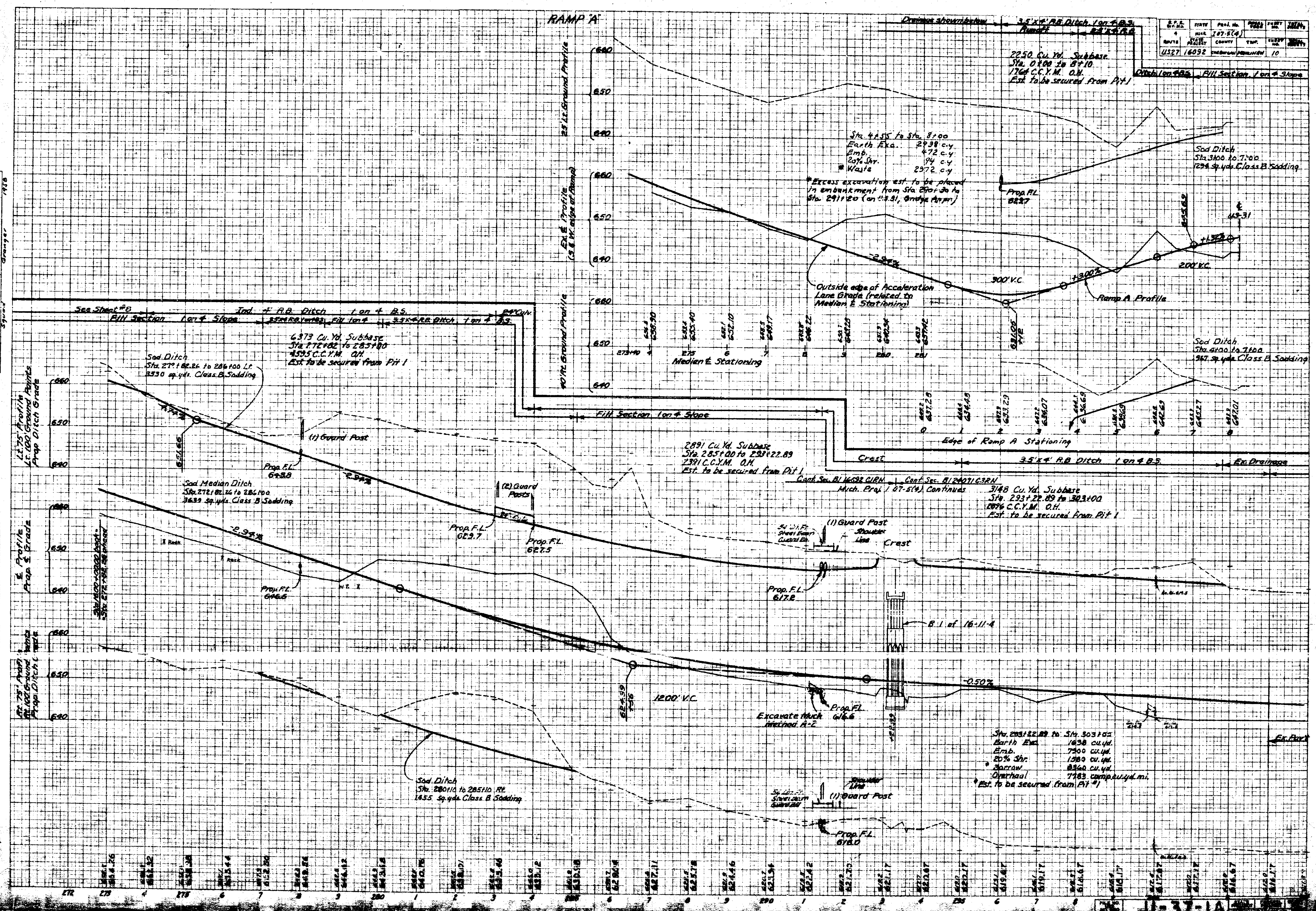
16092
 Place Curb & Gutter and Drainage
 Structures @ B.I. of 16-11-14
 (See Bridge Plans for details)
 (2) Catch Basins 3 B (10' deep or less)
 (2) Catch Basins 6 B (10' deep or less)
 80' of 12" Class B Culvert
 120' of 18" C.I.P.
 (3) Outlet Head, Det. 2
 12 sq. yds. Plain Rip-Rap
 34 Lin. ft. Curb & Gutter, Det. 12A
 100 Lin. ft. Bridge Approaches C.B. Det. 2



DATE	7/18
BY	Cheng
PROJECT	US 27
SECTION	10
NO.	10

DATE	
BY	
PROJECT	
SECTION	
NO.	

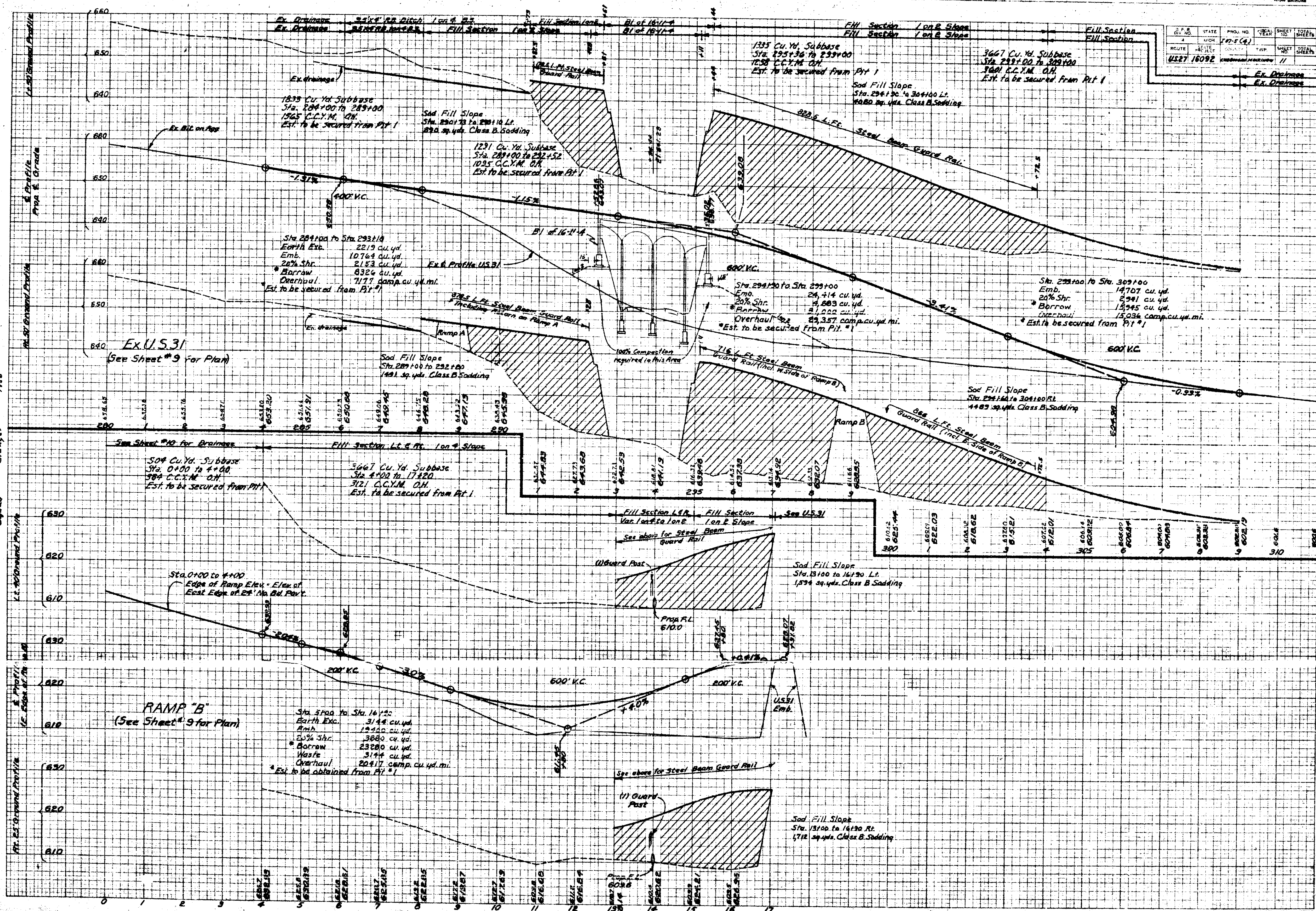
DATE	
BY	
PROJECT	
SECTION	
NO.	

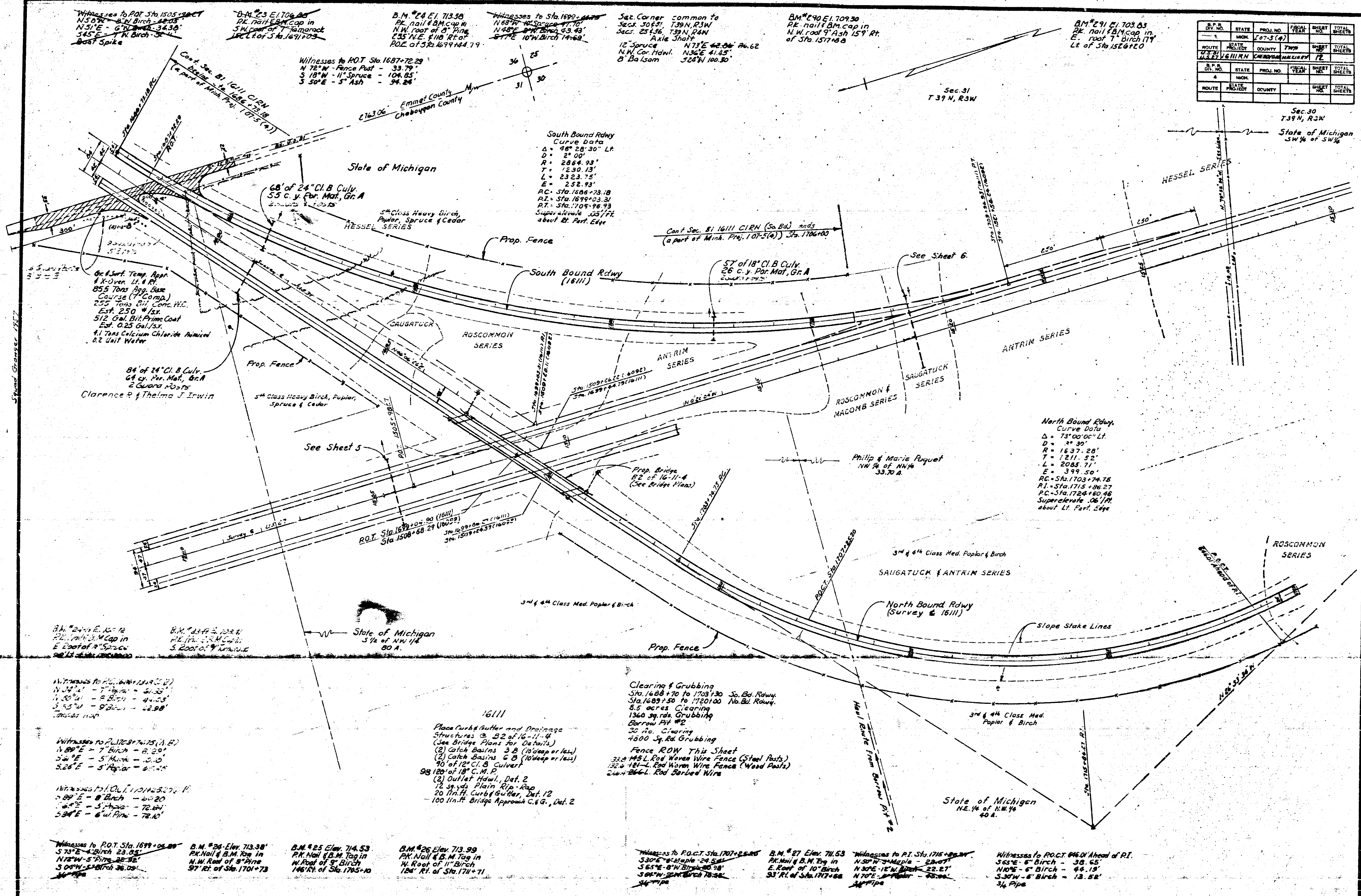


STATE	MI
COUNTY	Washtenaw
TOWNSHIP	10
RANGE	10
SECTION	10

1-37-10

DATE	3-57
BY	V.J.
CHECKED	3-57
REVISION	3-57



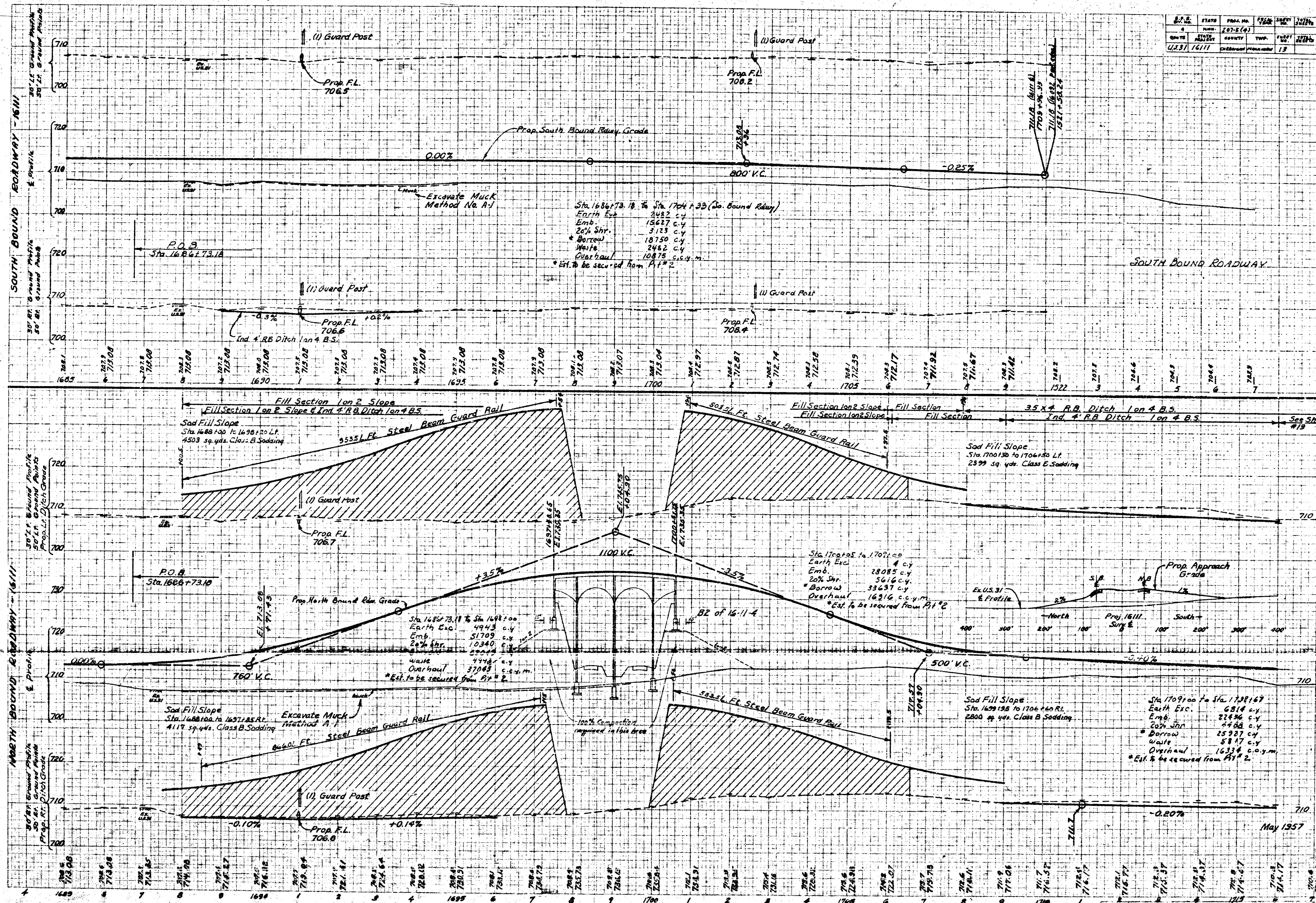


STATE	PROJECT	COUNTY	TWP	RANGE	SHEET	TOTAL SHEETS
MICH	16092 CI-1611 CI-24071.63	EMMET	T39N	R3W	12	12

STATE	PROJECT	COUNTY	TWP	RANGE	SHEET	TOTAL SHEETS
MICH	16092 CI-1611 CI-24071.63	EMMET	T39N	R3W	12	12

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPERATURE		
	APPLD		
NO	AREAS CHANGED		

ORIGINAL	SURVEY	BUREAU PRINTED TEMPLAY AREAS	BY KCB	DATE MAY 87
NOTE H 10 M				
NO.				

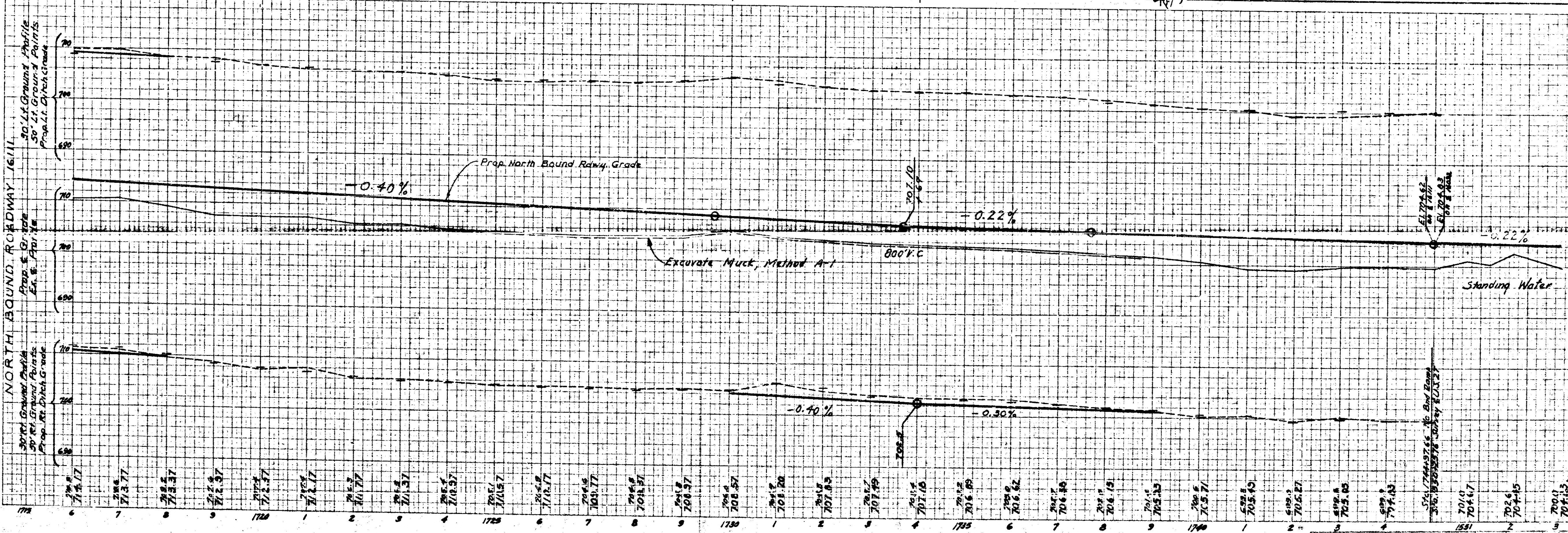
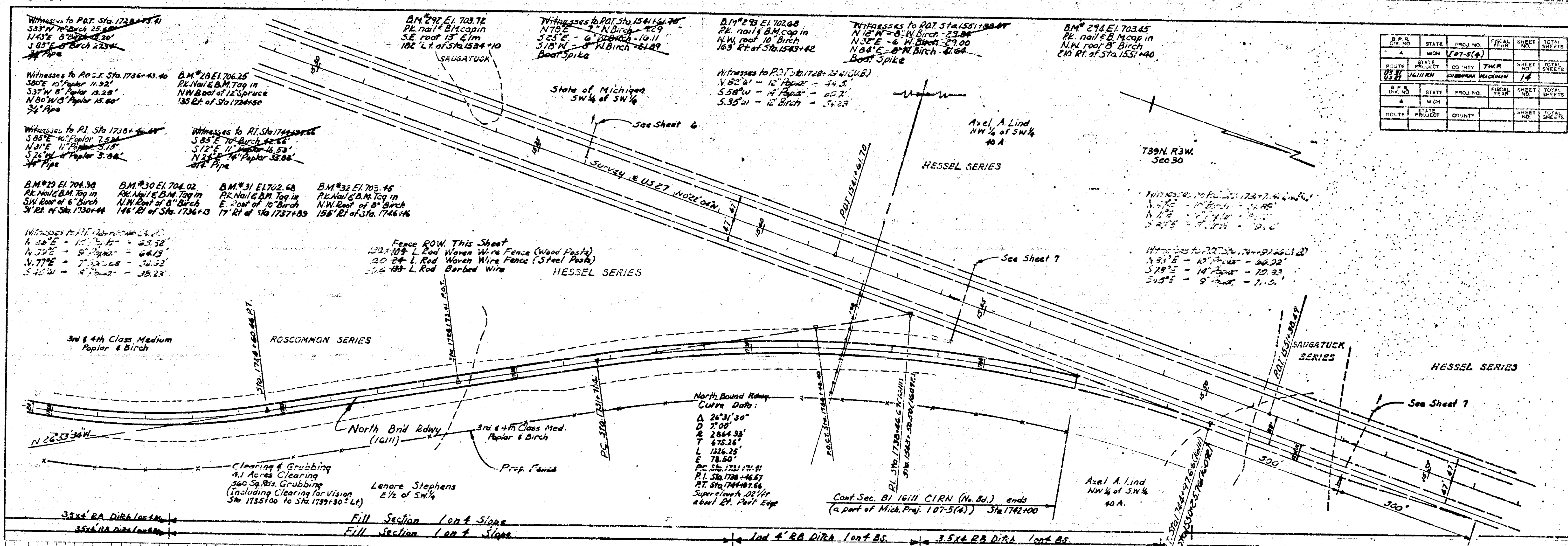


May 1951

U-37-1

16092.CI-16111.CI-24071.C3

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
MI	107-5(4)	14	14



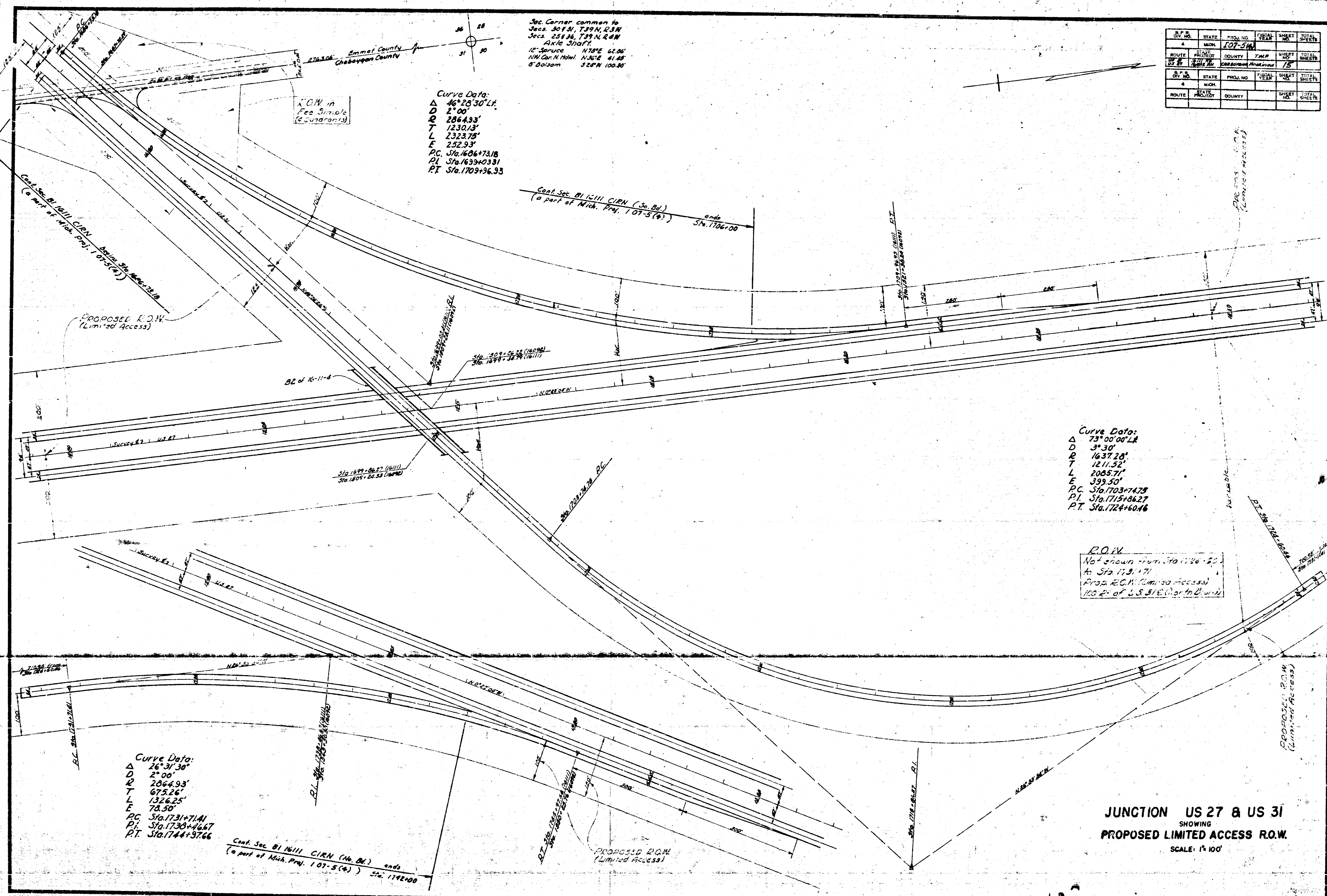
DATE	BY	OPERATION
10/1/51	R.B.	PRELIMINARY S.O.W. RECORDED
10/1/51	R.B.	FINAL DESIGN EXPRESSED
10/1/51	R.B.	FINAL S.O.W. RECORDED
10/1/51	R.B.	QUANTITIES
10/1/51	R.B.	QUANTITIES CHECKED
10/1/51	R.B.	SQUAD

DATE	BY	OPERATION
10/1/51	R.B.	PRELIMINARY S.O.W. RECORDED
10/1/51	R.B.	FINAL DESIGN EXPRESSED
10/1/51	R.B.	FINAL S.O.W. RECORDED
10/1/51	R.B.	QUANTITIES
10/1/51	R.B.	QUANTITIES CHECKED
10/1/51	R.B.	SQUAD

U-37-1A

160926161111-2407163

Prop ROW 5-28-57 L.A.



Sec Corner common to
Secs. 30 & 31, T39N, R31W
Secs. 25 & 36, T39N, R31W
Axle Shaft
10° 30' 00" N 73° 00' 00" E 61.85'
NW Cor. N. 10th. N 36° E 41.85'
S Olson 32° 00' 00" E 100.85'

Curve Data:
Δ 46°28'30" L
D 2'00"
R 2864.33'
T 1230.13'
L 2323.75'
E 252.93'
P.C. Sta. 1686+73.18
P.L. Sta. 1699+03.81
P.T. Sta. 1709+96.93

Curve Data:
Δ 73°00'00" L
D 3'30"
R 1637.28'
T 1211.52'
L 2005.71'
E 399.50'
P.C. Sta. 1703+74.73
P.L. Sta. 1715+06.27
P.T. Sta. 1724+60.46

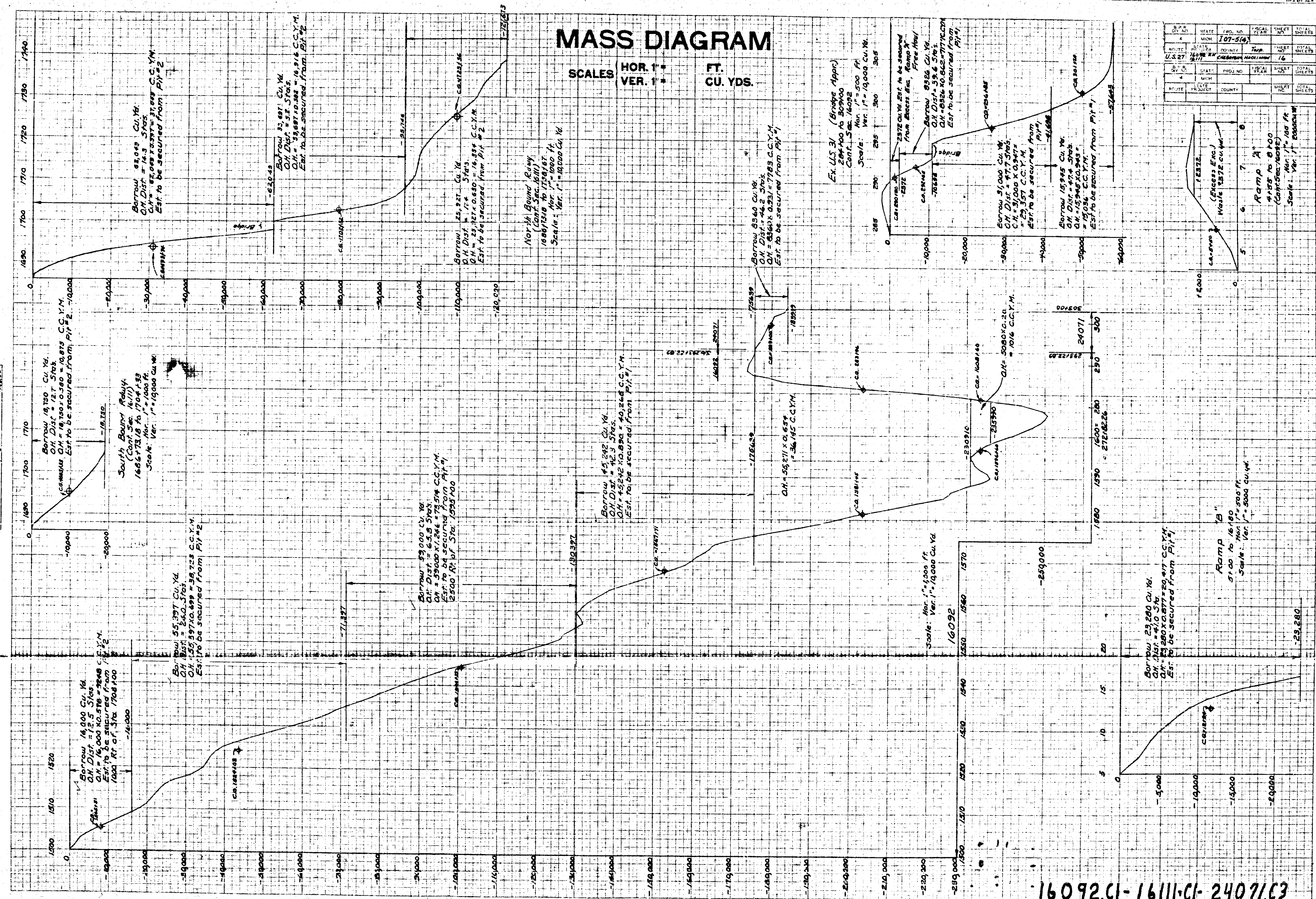
R.O.W.
Not shown from Sta. 1724+60.46
to Sta. 1731+171
Prop. R.O.W. (Limited Access)
100 ft. of U.S. 31 E. (North Curve)

Curve Data:
Δ 26°31'30" L
D 2'00"
R 2064.93'
T 675.26'
L 1326.25'
E 78.50'
P.C. Sta. 1731+71.41
P.L. Sta. 1738+46.67
P.T. Sta. 1744+37.66

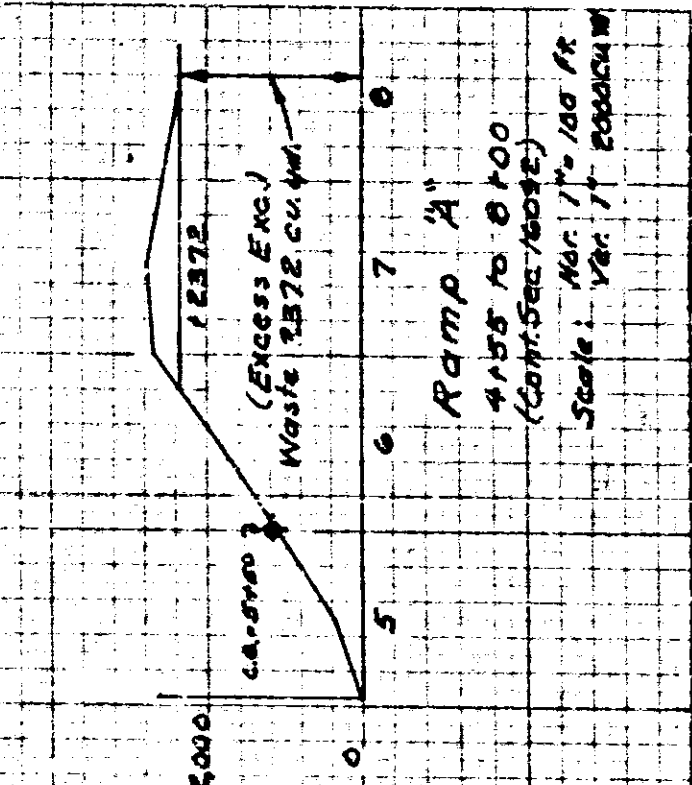
JUNCTION US 27 & US 31
SHOWING
PROPOSED LIMITED ACCESS R.O.W.
SCALE: 1" = 100'

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
MI.	107-54	15	15
ROUTE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
US 27	107-54	15	15
US 31	107-54	15	15

DATE	BY	FLIGHT
4-18-58	WLB	1-58
		CHECKED



STATE	ROUTE	PROJECT	SHEET NO.	TOTAL SHEETS
U.S. 27	16092	16111	2407	16



16092.CI-16111.CI-2407.C3
U-37-1A

QUANTITY SHEET-F

[illegible][illegible]

24071.C3

U-37-1A

STATE PROJECT	FEDERAL PROJECT	SHEET NO.
16-92	107-5(4)	10

S.F.S. ENV. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MOH	107-5(4)		
ROUTE	STAFF PROJECT	COUNTY	SHEET NO.	TOTAL SHEETS
US 87	MOSE	TRN		
		DOUGLAS	12	

[illegible]

FILE NO. USE FBI STENOIL	U-37-1A	STATE PROJECT 107-5(4)	FEDERAL PROJECT 107-5(4)	SHEET NO. 19
-----------------------------------	---------	------------------------------	--------------------------------	--------------------